

UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Benoit AMBROISE, *et al.*Examiner: Hai VO *H*

USSN: 09/734,101

Group Art Unit: 1771

Filed: December 11, 2000

Attorney Docket No.: 10244 *KW 22503*For: Porous Biaxially Oriented High Density
Polyethylene Film With Hydrophilic
Properties

Date: February 21, 2003

ATTN: BOX AF
Commissioner for Patents
Washington, D.C. 20231

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RESPONSE UNDER 37 C.F.R. § 1.116

Sir:

Please consider the remarks below in response to the Action mailed December 3, 2002.

Claims 1-9 are all the claims pending in the application.

Applicants note with appreciation that the Examiner has withdrawn the art rejection over U.S. Patent 5,455,217 to Chang, *et al.* ("Chang") in view of U.S. Patent 6,276,273 to Aurenty, *et al.* ("Aurenty") or U.S. Patent 3,877,372 to Leeds, *et al.* ("Leeds").

The Examiner, however, has maintained the following art rejection:

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent 5,468,712 to Minato, *et al.* ("Minato") in view of Aurenty or Leeds.

Applicants respectfully traverse, and kindly request that the Examiner carefully consider the following remarks.

It is well-settled that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification [*see, In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984)].

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Similarly, if the proposed modification of the prior art would change the principle of operation of the prior art invention, then the teachings of the references are not sufficient to render the claims *prima facie* obvious [see, *In re Ratti*, 123 USPQ 349 (CCPA 1959)].

In the present case, the Examiner appears to have taken the position that Minato, Aurenty and Leeds are analogous art, and a person of ordinary skill in the art would be motivated to replace Minato's dye image-receiving layer with Aurenty's surfactant (or Leeds' silicone glycol-containing chemical system) because they both come into contact with an ink to form an image (Applicants refer to, for example, the last paragraph at page 3 of the final Action).

Applicants respectfully disagree. A person of ordinary skill in the art attempting to modify Minato's thermal transfer dye image-receiving sheet would not be motivated by either Aurenty or Leeds, each of which relate to printing plates for *lithographic* printing. Modifying Minato's dye image-receiving sheet with one or more elements from Aurenty's or Leeds' disclosures would change the principle of operation of Minato's sheets, and render Minato's sheets unsatisfactory for their intended purpose.

In this regard, it is of the utmost importance to have a clear understanding of the different characteristics of thermal transfer printing and lithographic printing.

Thermal Transfer Printing

Minato's disclosure relates to a thermal transfer dye image-receiving sheet. Minato provides a general description of thermal transfer dye printing at column 1, lines 15-31.

Therein, it is explained that in the operation of a thermal transfer dye printer, an image-receiving sheet is provided. The image-receiving sheet has an image-receiving layer comprising a dye-dyeable resin. The image-receiving sheet is the focus of Minato's invention. For the sake of convenience and clarity, the image-receiving sheet may also be referred to as Element 1 of Minato's invention.

The image-receiving sheet (Element 1) is superimposed on a dye sheet that has a sublimating dye layer. The dye sheet with sublimating dye layer may be referred to as Element 2.

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The image-receiving layer of the image-receiving sheet (Element 1) comes into contact with the sublimating dye layer of the dye sheet (Element 2), and the dye sheet (Element 2) is locally heated image-wise by a thermal head in accordance with electric signals corresponding to the images or pictures to be printed. Accordingly, dye images or pictures are thermally transferred from the dye sheet (Element 2) to the image-receiving sheet (Element 1). The transferred dye images or pictures have a color density corresponding to the amount of heat applied to the dye sheet (Element 2).

The most important fact to note regarding thermal transfer printing and Minato's disclosure is as follows: Minato's image-receiving sheet, i.e., Element 1, will contain the final, high quality picture that is uniform with a high color density (Applicants refer to column 1, lines 32-49).

Lithographic Printing

The disclosures of Aurenty and Leeds relate to lithographic printing, and, specifically, lithographic printing plates. Aurenty provides a general description of lithographic printing at column 1, line 13 through column 2, line 24. Leeds provides a general description of lithographic printing at column 1, lines 9-21.

As explained by both Aurenty and Leeds, a roller carrying an oil-based ink composition is passed over a dampened plate. The oil-based ink composition is unable to ink the non-image areas, but it emulsifies the water droplets on the image areas, which then take up ink. The resulting ink image is transferred onto a blanket cylinder, which is then used to print a substrate, such as paper (Applicants specifically refer to column 1, lines 26-29 of Aurenty and column 1, lines 19-21 of Leeds).

Indeed, the disclosures at column 1, lines 26-29 of Aurenty and column 1, lines 19-21 of Leeds relate to a fundamental fact about lithographic printing that cannot be overlooked: a printing plate is used in a process for transferring an image from the plate onto a printing medium, such as paper or film. In other words, unlike Minato's image-receiving sheet, printing

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plates for lithographic printing, such as the printing plates in Leeds and Aurenty, are designed such that an image thereon may be easily transferred to a final printing medium.

The "direct" ink jet printing lithographic technique disclosed at column 1, lines 29-39 of Aurenty does not change the fundamental function of a lithographic printing plate. An oil-based ink must still be transferred to the image areas of the plate for printing onto a printing medium (Applicants specifically refer to column 1, lines 34-36). The plate is still used to transfer the image onto a printed medium.

In fact, as disclosed at column 2, lines 20-25 and column 4, lines 52-55, the ink jet printer jets an ink-receptive composition onto the plate in the form of the desired image. The ink-receptive composition is then dried or cured on the plate by thermal or UV radiation prior to receiving the ink that will be ultimately transferred onto the final printing medium (*see also*, column 5, lines 24-25).

Applicants kindly invite the Examiner to carefully review Example 10 (Press Trial Evaluation) at column 10 of Aurenty. At lines 65-67 of column 10, it is clearly explained that the plates are mounted on a lithographic printing press and used to print a number of copies. It is noted that the ink jet printers were used to image ink-receptive fluid compositions onto plates, and thereafter the plates are mounted on a press, receive ink, and are used to print copies.

Ink Jet Printing According to the Present Invention

Although there are differences between Minato's thermal transfer printing and the present ink jet printing, films according to the present invention, like Minato's image-receiving sheet, are the final destination for a high quality image. The present films must rapidly absorb the ink, so that the ink does not remain wet for an extended period -- otherwise, the ink is likely to smear when successive sheets are stacked in the output tray of a printer. The present films must ensure that contact of the image with moist surfaces (such as sweaty fingers) does not result in bleeding of ink from the image (Applicants refer to the description at page 3, lines 1-24 of the specification).

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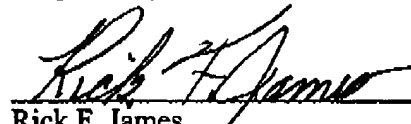
The present films and Minato's image-receiving sheets are completely different from the printing plates of Aurenty and Leeds.

A person of ordinary skill in the art would not be motivated to modify Minato's image-receiving sheet with elements from Aurenty or Leeds. To do so would change the principle of operation of Minato's sheets, and render Minato's sheets unsatisfactory for their intended purpose. In particular, modifying Minato's image-receiving sheets according to Aurenty or Leeds would provide a lithographic printing plate precursor unsuitable for use in Minato's thermal transfer printing operation.

For each of the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw the remaining §103 rejection.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Rick F. James
Registration No. 48,772

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ExxonMobil Chemical Company
Law Technology Department
4500 Bayway Drive
P. O. Box 2149
Baytown, Texas 77522-2149
(281) 834-5675
(281) 834-2911 (Fax)

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